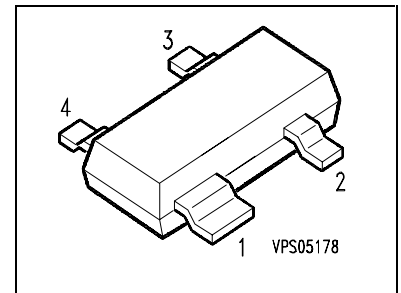


Silicon PIN Diode

- High voltage current controlled
RF resistor for RF attenuator and switches
- Frequency range above 1 MHz
- Low resistance and short carrier lifetime
- For frequencies up to 3 GHz



Type	Marking	Ordering Code (tape and reel)	Pin Configuration				Package ¹⁾
			1	2	3	4	
BAR64-07	PTs	Q62702-A1044	C1	C2	A2	A1	SOT-143

Maximum Ratings per Diode

Parameter	Symbol	BAR 64-07	Unit
Reverse voltage	V_R	200	V
Forward current	I_F	100	mA
Total Power dissipation $T_S \leq 25^\circ\text{C}$	P_{tot}	250	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Operating temperature range	T_{op}	-55 +150 $^\circ\text{C}$	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55...+150 $^\circ\text{C}$	$^\circ\text{C}$

Thermal Resistance

Junction-ambient ¹⁾	$R_{\text{th JA}}$	≤ 450	K/W
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¹⁾Package mounted on alumina 15mm x 16.7mm x 0.7mm

Electrical Characteristics

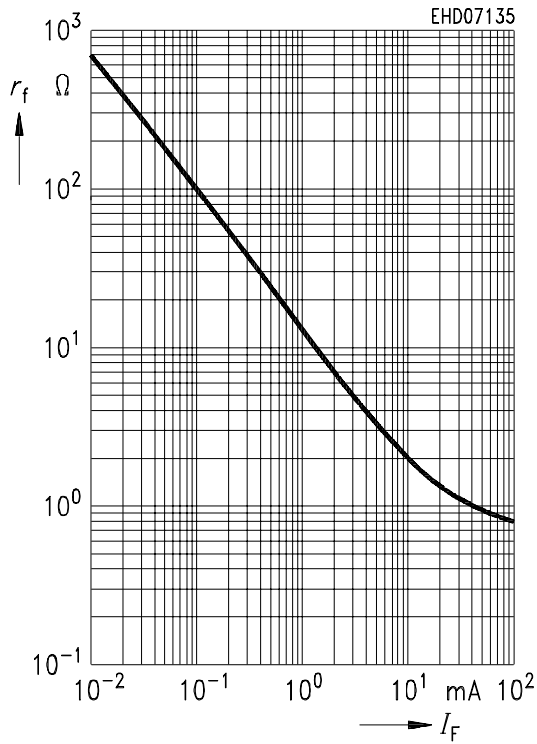
at $T_A = 25\text{ °C}$, unless otherwise specified.

Parameter	Symbol	Value			Unit
		min.	typ.	max.	

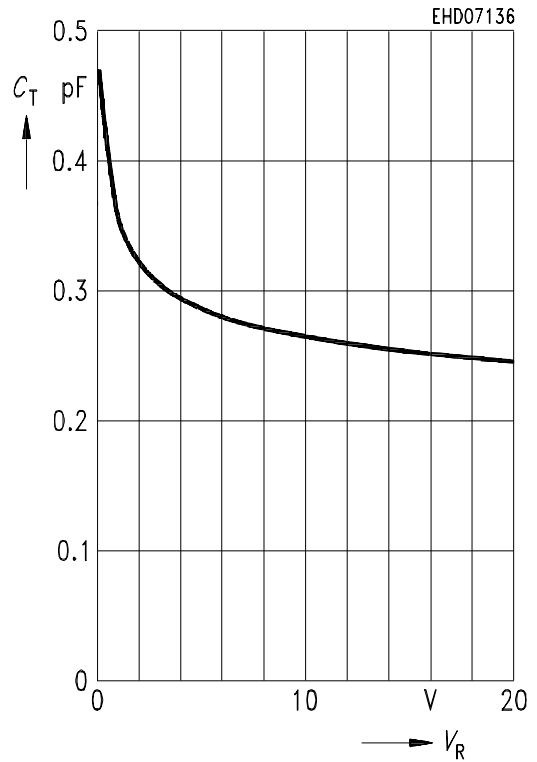
DC Characteristics per Diode

Breakdown voltage $I_R = 5\ \mu\text{A}$	$V_{(BR)}$	200	-	-	V
Forward voltage $I_F = 50\ \text{mA}$	V_F	-	-	1.1	V
Diode capacitance $V_R = 20\ \text{V}$, $f = 1\ \text{MHz}$	C_T	-	0.23	0.35	pF
Forward resistance $I_F = 1\ \text{mA}$, $f = 100\ \text{MHz}$ $I_F = 10\ \text{mA}$, $f = 100\ \text{MHz}$ $I_F = 100\ \text{mA}$, $f = 100\ \text{MHz}$	r_f	- --	12.5 2.1 0.85	20 3.8 1.35	Ω
Charge carrier lifetime $I_F = 10\ \text{mA}$, $I_R = 6\ \text{mA}$, $I_R = 3\ \text{mA}$	τ_L	-	1.55	-	μs
Series inductance	L_s	-	2.0	-	nH

Forward resistance $r_f = f(I_F)$
 $f = 100 \text{ MHz}$



Diode capacitance $C_T = f(V_R)$
 $f = 1 \text{ MHz}$



Forward current $I_F = f(V_F)$

